Installation Instructions

Parallel Rigid Arm Door Closers (PR)
CloserPlus® Door Closers (CLP)

Model Numbers Included:
- PR8101(H) / PR810X(H)
- PR8301(H) / PR830X(H)
- PR8501(H) / PR850X(H)
- CLP8101(T) / CLP810X(T)
- CLP8301(T) / CLP830X(T)
- CLP8501(T) / CLP850X(T)

Note ‘X’ Designates Size 2, 3, 4, 5, or 6

Additional Closer Options:
- “DA” indicates Delayed Action closing.
- “H” indicates Hold-Open function for “PR” prefix units. The arm is handed.
- “T” indicates Thumbturn actuated Hold-Open control for “CLP” prefix units.

Optional Accessories:
- 8148 Drop plate
- 2019L, 6890, 6891 Soffit Plate Accessories.

NOTE: For special applications a separate door and frame preparation template is packed with these instructions. In those cases, use this instruction sheet for installation sequence and closer adjustments only.

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Standard Frame Installation
Closer mounts on opposite to hinge (push) side of door. PR8300 Parallel Rigid Non Hold Open arm illustrated. Slim Line Cover shown.

See Pages 3 and 4

Right Hand Door – RH
Left Hand Reverse – LHR

Left Hand Door – LH
Right Hand Reverse – RHR

Narrow Frame Installation
Closer mounts on opposite to hinge (push) side of door. CLP8500 CloserPlus arm illustrated. Full Cover shown.

See Pages 3 and 4

Right Hand Door – RH
Left Hand Reverse – LHR

Left Hand Door – LH
Right Hand Reverse – RHR

Flush Partition Installation
Closer mounts on opposite to hinge (push) side of door. CLP8100T CloserPlus arm with Thumbturn Hold Open illustrated.

Closer Cover not shown. 2019L accessory required for this application (supplied separately).

See Pages 3 and 4

Right Hand Door – RH
Left Hand Reverse – LHR

Left Hand Door – LH
Right Hand Reverse – RHR
Components

- Backcheck Valve
- Delay Valve (Optional)
- Closer Body
- Latch Valve
- Sweep Valve
- Power Adjustment Shaft
- Soffit Plate
- 2019S Block (provided)

Optional Accessories

- For Blade Stop 6891 Spacer
- For Frame or Blade Stop 6890 Bracket
- For Flush Partition 2019L Bracket

Arm Options

- Removable Stop
- CLP Arm Assembly
- Riveted Elbow
- PR Arm Assembly
- Optional Architectural Plastic Cover * [8500A/8501A]
- Standoff
- Thumbturn Hold Open

Cover Options

- Standard Full Plastic Cover [8500/8501]
- Insert Cutouts
- Cover Insert
- 8400P Cover
- Standard Slim Line Plastic Cover [8300/8301]
- Pinion Cap [1639]
- Optional Full Metal Cover [8500M/8501M]
- Insert Cutouts
- Cover Insert
- 8400M Cover
- Optional Architectural Plastic Cover * [8500A/8501A]
- Standoff
- Insert Cutouts
- Cover Insert
- 8400A Cover

Preparation for Fasteners

<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Door or Frame</th>
<th>Drill-Sizes</th>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Self-Drilling Screw</td>
<td>Aluminum or Metal</td>
<td>No drill required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wood (see Note)</td>
<td>3/16&quot; (4.30 mm) (pilot hole required)</td>
<td></td>
</tr>
<tr>
<td>1/4&quot; - 20 machine screw</td>
<td>Metal</td>
<td>Drill: #7 (0.201&quot; dia.) Tap: 1/4&quot; - 20</td>
<td></td>
</tr>
</tbody>
</table>

Optional Sleeve nuts and bolts

- Hollow Metal
- 9/32" (7 mm) through; 3/8" (9.5 mm) door face opposite to closer
- Aluminum or Wood
- 3/8" (9.5 mm) through

Through-bolts and grommet-nuts

- All 9/32" (7 mm); 3/8" (9.5 mm) dia. x 3/8" (9.5 mm) deep on door opposite to closer

* Note: Closers with 'PR' prefix cannot be installed on doors swinging beyond 120° when using 8400A or 8400MA cover.
Installation Instructions

- Select angle of opening and use dimensions shown on Page 4 and Dimension Chart below to locate 4 holes on stop side of door for closer body (or 8148 drop plate, only if required, see page 5) and 5 holes on stop and/or rabbet for Soffit Plate. For applications not covered in these instructions, a separate template will be required.

- Prepare door and frame for fasteners. See “Preparation for Fasteners”, Page 2.

- Set approximate closer power for door size using Power Adjustment Chart below. Use 1/8” hex wrench supplied to adjust Power Adjustment Shaft (set at 8 turns from factory) ... 20 turns maximum. Turn nut CLOCKWISE to Increase, COUNTER-CLOCKWISE to Decrease power. See Page 6 for the illustration of this step.

- Mount 8148 Dropplate ... only if required (see Page 5).

- Install closer with power adjustment shaft toward hinge edge of door. Note: If using full metal cover, cover mounting clips must be slipped under ends of closer when closer is being mounted. Clips should project 1/4” (6mm) beyond each end of closer.

- For suffix “H” only, check that hand of arm matches hand of door. See arm illustration on page 2 for location of arm handing mark.

- With door closed, closer valves ‘S’ and ‘L’. Then with a wrench, turn pinion shaft 50° or more to permit proper alignment of arm mark with pinion flat - ‘L’ for Left hand door, ‘R’ for Right hand door.

See Arm Mounting Detail and Main Arm Installation at right below. (Caution: Closer arm is under spring tension and may be difficult to rotate.)

- Reopen valves ‘S’ and ‘L’ by turning counter clockwise.

- With door closed, align, align soffit plate with mounting holes in frame. Fasten soffit plate to frame with flat head screws provided.... use spacer soffit plate with mounting holes in frame. Fasten soffit plate to frame with flat head screws provided.... use spacer soffit plate with mounting holes in frame. Fasten soffit plate to frame with flat head screws provided.... use spacer...

- Make closer adjustments (see page 6) before installing cover ... NOTE: DO NOT back valves out of closer or a leak will result.

- Install cover (see page 6). NOTE: Architectural Covers 8400A and 8400MA CAN NOT be used with “PR” prefix closers that are installed for doors openings in excess of 120°.

### Installation Dimensions Chart

<table>
<thead>
<tr>
<th>Dim</th>
<th>65° to 90°</th>
<th>90° to 180°</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR8101/PR8301/PR8501</td>
<td>9-1/2 (241)</td>
<td>7 (178)</td>
</tr>
<tr>
<td>CLP8100/CLP8300/CLP8500</td>
<td>3-3/4 (95)</td>
<td>1-1/4 (32)</td>
</tr>
</tbody>
</table>

### Power Adjustment Chart

<table>
<thead>
<tr>
<th>Door Size</th>
<th>Full Clockwise Turns of Closer Power Adjustment Shaft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>7 10 13 16</td>
</tr>
<tr>
<td>Exterior</td>
<td>9 12 15 18</td>
</tr>
<tr>
<td>Interior</td>
<td>9 11 13 15</td>
</tr>
<tr>
<td>Exterior</td>
<td>10 12 14 16</td>
</tr>
</tbody>
</table>

NOTE: Maximum of 20 turns (360°) of Power Adjustment Shaft. Closer is shipped set at mid power setting.

* Series PR8500A, PR8500MA, and CAN NOT be installed for 120° to 180° door openings.
Notes:
Do Not Scale Drawing.
Left Hand Door Shown.
Same dimensions apply for Right Hand
Door measured from centerline of pivot point.
Dimensions are in inches (mm).
See Page 3 for A & B dimension values.

*Use 9/16 (14) in openings with blade stops.

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ASSA ABLOY, the global leader in door opening solutions
80-9380-2209-020 (05-14)
8148 Drop Plate Mounting Holes

Standard Frame

Narrow Frame

*NOTE: This dimension must be taken from the same surface that the Soffit Plate is fastened to.

Flush Partition

Thumbturn Hold-Open Feature ("CLP" prefixed units only)
The Thumbturn Hold-Open feature is controlled by the knob located on the arm of the unit. Turning this knob clockwise will engage the Hold-Open mechanism and increase the Hold-Open force. Turning this knob counterclockwise will reduce the Hold-Open force and disengage the Hold-Open mechanism.

Friction Hold-Open Feature ("PR" prefixed units only)
Hold door open to opening angle desired and tighten holder-adjustment-nut (wrench supplied) or use 1" Box or Open End wrench.

Thumbturn Action
(Units suffixed "T")
Unit Adjustment
Closing Power Adjustment (8X01 closers only –
Using “Power Adjustment Chart” from Page 3, select the
correct number of turns for power adjustment shaft that
corresponds with the installation. With 1/8” hex-key provided,
rotate adjustment shaft full 360° clockwise turns to desired
setting. After closer has been installed and proper
adjustments made to the sweep and latch, it may be
necessary to readjust spring power for good closing action.

Control Valve Adjustments
(See Figure 2.)

Closing Speed Controls (Figure 1A or 1B and 2.)
Valve “S” Controls Sweep Range.
• Valve “L” Controls Latch Range.
• Valve “D” Controls Delay Range (optional).

Opening Cycle
“Backcheck” valve controls the strength of cushioning in
Backcheck Range. NEVER close this valve completely – it
is not to provide a positive stop. (see Figure 4 and Figure 5).

Cover–Full cover: Slide cover insert into the un-used cutout
in cover. Install cover using screws provided.
Narrow cover: Install cover using screws provided. Install
pinion cap onto pinion shaft by hand or with a Phillips screw
driver - DO NOT OVER TIGHTEN.
Metal cover: Fasten cover to mounting clips with screws
provided.
Architectural Metal Cover: Remove cover insert where
pinion is located. Install standoffs in ends of closer. Install
cover using screws provided.
Architectural Plastic Cover: Slide cover insert into the un-
used cutout in cover. Install standoffs in ends of closer.
Snap cover over standoffs.

Closing Power Control
Figure 3.

NOTE: Maximum of 20 360° turns
of Power Adjustment Shaft

Increase
5/16” Socket
or Adjustable Wrench
Power Adjustment Shaft

Decrease

Opening Door Control
Figure 4.

CAUTION:
DO NOT BACK VALVES OUT OF
CLOSER OR A LEAK WILL
RESULT.

CAUTION:
DO NOT BACK VALVE OUT OF
CLOSER OR A LEAK WILL
RESULT.

NEVER CLOSE VALVES
COMPLETELY - NOT
INTENDED TO PROVIDE
A POSITIVE STOP.

Backcheck Control
Figure 5.

Increase
Backcheck Valve*

Decrease

Cover Mounting
Figure 6.

5/16” Socket
or Adjustable Wrench

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